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EXAMINER
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JOO, JOSHUA

ART UNIT	PAPER NUMBER
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2154

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/933,369	WILLIAMSON, RICHARD	
	<b>Examiner</b>	<b>Art Unit</b>	
	Joshua Joo	2154	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 August 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-75 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-75 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. Claims 1-75 are presented for examination.
2. Claims 1-75 are rejected.

***Claim Objections***

3. Claim 16 is objected to because of the following informalities: "wherein he step" should be "wherein the step". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. Claim 42 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- i) As per claim 42, "the data entity" lacks proper antecedent basis. (Is the data entity referring to the first data entity?)

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4, 6, 10-11, 13, 15-17, 21-22, 24, 26-27, 32, 34, 36, 38-45, 48, 50, 52-56, 58, 60-67, 71-74 are rejected under 35 U.S.C. 102(e) as being unpatentable by Dillon et al, US Patent #6,321,268 (Dillon hereinafter).

7. As per claims 1, 4, 43, 55, 58, 64, 67, 71, 74, Dillon teaches an invention for adding headers to packets to determine the medium of transmission for downloading of data. Dillon's invention comprises of: (Col 4, lines 39-42. The invention has a processor to execute instructions stored in memory.)

a) Intercepting a first data entity from a stream of processing, before the stream of processing sends the first data entity over a first medium, the first medium differing from second medium (Col 6, lines 5-20. For satellite transmission, IP packet requests are encapsulated and send to the SLIP provider then to the application server. Col 6, lines 32-33. The hybrid gateway receives the reply packet from the application server. Col 18, lines 48-56. For terrestrial path, the application server would have sent the reply packet to the hybrid terminal via the Internet without going to the hybrid gateway.).

b) Adding one or more data elements to the first data entity to generate a second data entity, the data elements allowing the second data entity to be transferred over the second medium (Col 6, lines 37-39. Hybrid gateway encapsulates the packet to send over the satellite transmission.)

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- c) Transmitting the second data entity over the second medium (Col 6, lines 41-44.

The hybrid gateway sends the packet to satellite gateway, where the satellite gateway broadcasts the packets send from the gateway.),

- d) Removing the data elements from the second data entity to generate a first data entity (Col 6, lines 48-49. Hybrid terminal removes satellite header revealing reply IP packet), and

- e) Inserting the first data entity into the stream of processing, after the stream of processing would have send the first data entity over the first medium (Col 6, lines 49-50. Once the reply packet is revealed, it is send to the driver. Col 18, lines 36-44. For terrestrial transmission, the application server sends the reply packets via the Internet and to the hybrid terminal).

8. As per claims 2, 65, 72, Dillon teaches an invention for adding headers to packets to determine the medium of transmission for downloading of data. Dillon's invention comprises of: (Col 4, lines 39-42. The invention has a processor to execute instructions stored in memory.)

- a) Intercepting a first of a plurality of data entity from a stream of processing, before the stream of processing sends the first data entity over a first medium, the first medium differing from second medium (Col 6, lines 5-20. For satellite transmission, IP packet requests are encapsulated and send to the SLIP provider then to the application server. Col 6, lines 32-33. The hybrid gateway receives the reply packet from the application server. Col 18, lines 48-56. For terrestrial path, the application server would have sent the reply packet to the hybrid terminal via the Internet without going to the hybrid gateway.).).

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b) Adding one or more data elements to the first data entity to generate a second data entity, the data elements allowing the second data entity to be transferred over the second medium (Col 6, lines 37-39. Hybrid gateway encapsulates the packet to send over the satellite transmission.)

c) Transmitting the second data entity over the second medium (Col 6, lines 41-44. Satellite gateway broadcasts the packets send from the gateway.),

d) Removing the data elements to generate a first data entity (Col 6, lines 44-45. Hybrid terminal removes satellite header revealing reply IP packet), and

e) Inserting the first data entity into the stream of processing, after the stream of processing would have send the first data entity over the first medium (Col 6, lines 45-46. Once the reply packet is revealed, it is send to the driver. Col 18, lines 36-44. For terrestrial transmission, the application server sends the reply packets via the Internet and to the hybrid terminal).

f) Repeating steps (a-e) for each one of the plurality of remaining data entities (Col 3, lines 42-43. All data downloaded from the Internet via satellite is through this process).

9. As per claims 3, 44, 56, 73, Dillon teaches an invention for adding headers to packets to determine the medium of transmission for downloading of data. Dillon's invention comprises of: (Col 4, lines 39-42. The invention has a processor to execute instructions stored in memory.)

a) Receiving a first data entity transmitted over a second medium, the second medium different from a first medium, the first data entity having been transformed from a second data entity by the addition of one of more data elements (Col 6, lines 45-48. Hybrid

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terminal receives packet send over the satellite link. Col 6, lines 37-38. Hybrid gateway encapsulates the packet for satellite transmission. Col 18, lines 8-10. There are two mediums for transmission, through satellite or the Internet),

b) Generating the second data entity by removing the data elements (Col 6, lines 44-45. Satellite header is removed from the packet); and

c) Inserting the second data entity into a stream of processing (Col 6, lines 44-45. The reply IP packet is send to the driver).

10. As per claims 42, 54, Dillon teaches an invention for adding headers to packets to determine the medium of transmission for downloading of data. Dillon's invention comprises of: (Col 4, lines 39-42. The invention has a processor to execute instructions stored in memory.)

A host, the host operable to:

a) Intercept a first data entity from a stream of processing, before the stream of processing sends the data entity over a first medium (Col 6, lines 5-20. For satellite transmission, IP packet requests are encapsulated and send to the SLIP provider then to the application server. Col 6, lines 32-33. The hybrid gateway receives the reply packet from the application server. Col 18, lines 48-56. For terrestrial path, the application server would have sent the reply packet to the hybrid terminal via the Internet without going to the hybrid gateway.),

b) Add one or more data elements to the first data entity generate a second data entity, the second data entity formatted for a second medium (Col 6, lines 37-39. Hybrid gateway encapsulates the packet to send over the satellite transmission.); and

c) Send the second data entity over the second medium, the second medium different from the first medium (Col 6, lines 41-44. Satellite gateway broadcasts the packets send from the gateway.),

A target, the target operable to:

d) Receive the second data entity from the second medium (Col 6, lines 45-49. Hybrid terminal receives the satellite packets),

e) Generate the first data entity by removing the data elements (Col 6, lines 48-49. The satellite header is removed, revealing the reply packet); and

f) Insert the first entity into a stream of processing (Col 6, lines 49-50. Reply IP packet is send to the driver).

12. As per claims 60-61, Dillon teaches an invention for adding headers to packets to determine the medium of transmission for downloading of data. Dillon's invention comprises of:

a) Intercepting a first of a plurality of data entity from a stream of processing, before the stream of processing sends the first data entity over a first medium, the first medium differing from second medium (Col 6, lines 5-20. For satellite transmission, IP packet requests are encapsulated and send to the SLIP provider then to the application server. Col 6, lines 32-33. The hybrid gateway receives the reply packet from the application server. Col 18, lines 48-56. For terrestrial path, the application server would have sent the reply packet to the hybrid terminal via the Internet without going to the hybrid gateway.).



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b) Adding one or more data elements to the first data entity to generate a second data entity, the data elements allowing the second data entity to be transferred over the second medium (Col 6, lines 37-39. Hybrid gateway encapsulates the packet to send over the satellite transmission.)

c) Transmitting the second data entity over the second medium (Col 6, lines 41-44. Satellite gateway broadcasts the packets send from the gateway.),

d) Inserting the second data entity into the stream of processing, after the stream of processing would have sent the data entity over the first medium (Col 6, lines 45-50. Hybrid terminal receives the packets and removes the satellite header. The reply IP packet is send to the driver. Col 18, lines 36-44. For terrestrial transmission, the application server sends the reply packets via the Internet and to the hybrid terminal.),

e) Repeating steps (a-d) for each one of the plurality of remaining data entities (Col 3, lines 47-48. All data downloaded from the Internet via satellite is through this process).

13. As per claims 62-63, Dillon teaches an invention for adding headers to packets to determine the medium of transmission for downloading of data. Dillon's invention comprises of:

a) Intercepting a first of a plurality of data entities from a stream of processing, before the stream of processing sends the data entity over a first medium, the first medium differing from a second medium (Col 6, lines 5-20. For satellite transmission, IP packet requests are encapsulated and send to the SLIP provider then to the application server. Col 6, lines 32-33. The application server sends reply packets to the hybrid gateway. Col 18, lines 48-56. For terrestrial path, the application server would have send the reply packet to the hybrid

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terminal via the Internet. Col 11, lines 17-30. Data being transmitted from through satellite transmission can comprise of games, software, and digital streams),

b) Transmitting the first data entity over the second medium (Col 6, lines 41-44. Satellite gateway broadcasts the packets send from the gateway.),

c) Removing one or more data elements from the first data entity to generate a second data entity (Col 6, lines 45-49. The hybrid terminal receives the packet. The header is removed from the packet, revealing the reply IP packet); and

d) Inserting the second data entity into the stream of processing, after the stream of processing would have sent the data entity over the first medium (Col 6, line 50. The reply IP packet is send to the driver. Col 18, lines 48-56. For terrestrial path, the application server would have send the reply packet to the hybrid terminal via the Internet); and

e) Repeating steps (a-d) for each one of the plurality of remaining data entities. (Col 3, lines 47-48. All data downloaded from the Internet via satellite is through this process).

14. As per claim 66, Dillon teaches an invention for adding headers to packets to determine the medium of transmission for downloading of data. Dillon's invention comprises of:

a) Receiving a first data entity transmitted over a second medium, the second medium different from a first medium, the first data entity having been formatted from a second data entity (Col 6, lines 45-49. Hybrid terminal receives the packets send over satellite transmission. Col 17, lines 62-64. There are two mediums for transmission, through satellite or the Internet);

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b) Formatting the first data entity to generate the second data entity by removing the data elements (Col 6, lines 48-49. Satellite header is removed from the received packet to reveal the reply IP packet); and

c) Inserting the second data entity into a stream of processing (Col 6, lines 49-50. The reply IP packet is send to the driver).

15. As per claims 6, 17 and 34, Dillon teaches the method as recited in claims 1 and 2, further comprising prior to the intercepting, the step of inserting, by a software tool, the data entity into the stream of processing (Col 5, lines 55-58. FTP software generates a request and passes it to the TCP/IP software.

16. As per claims 10, 21, and 40, Dillon teaches the method as recited in claims 1 and 2, wherein a target server performs the adding step (Col 6, lines 37-38. Gateway encapsulates packet for transmission).

17. As per claims 11, 22, and 41, Dillon teaches the method as recited in claims 1 and 2, wherein the target server performs the intercepting and adding steps. (Col 6, lines 37-385. Gateway receives packets from the application server and encapsulates packet for transmission).

18. As per claims 13, 24, 32, and 36, Dillon teaches the method as recited in claims 1, 2, and 4, wherein the step of adding further comprise the step of wrapping the first data entity with the data elements; and wherein the step of removing further comprises unwrapping the data elements from the second data entity (Col 6, lines 5-17. The IP packet is encapsulated or

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“tunneled” inside of another IP packet. When the hybrid gateway receives the packet, the tunneling header is removed).

19. As per claims 15, 26, and 38, Dillon teaches the method as recited in claims 1 and 2, wherein the step of intercepting further comprises removing the first data entity from a plurality of first handlers and step of inserting further comprises giving the first data to a plurality of second handlers (Col 6, lines 7-16. SLIP provider receives the packet and sends it to the hybrid gateway. Col 18, lines 44-48. SLIP provider receives the packet and sends it to the application server.)

20. As per claims 16, 27, and 39, Dillon teaches the method as recited in claims 1 and 2 wherein the step of intercepting and inserting is performed by a medium translation layer (Col 6, lines 38-40. The gateway formats the packet in order to transmit the packet over the satellite link).

21. As per claims 45, 48, and 50, Dillon teaches the system as recited in claims 42, 43, and 44, wherein the host is a server, and wherein the target is a client (Col 6, lines 20. Host is an application server. Col 6, lines 45-49. Target is the hybrid terminal, receiving the data packets).

22. As per claims 52 and 53, Dillon teaches the system as recited in claim 43 and 44, further comprising an output arranged to be coupled to a second medium (Col 6, lines 24-44. Reply packet is send to subnet containing a router connected to the hybrid gateway, which sends it to the satellite gateway. The satellite gateway then broadcasts the packets).

***Claim Rejections - 35 USC § 103***

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

24. Claims 7-9, 18-20, 28, 30-31, 35, 57, 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon, US Patent #6,115,750 and in view of Zak, Jr. et al, US Patent #6,789,258 (Zak, Jr. hereinafter).

25. As per claim 57, Dillon teaches an invention for adding headers to packets to determine the medium of transmission for downloading of data. Dillon's invention comprises of: (Col 4, lines 39-42. The invention has a processor to execute instructions stored in memory.)

a) Intercept a first data entity from a stream of processing, before the stream of processing sends the data entity over a first medium (Col 6, lines 5-20. For satellite transmission, IP packet requests are encapsulated and send to the SLIP provider then to the application server. Col 6, lines 32-33. The application server sends reply packets to the hybrid gateway. Col 18, lines 48-56. For terrestrial path, the application server would have send the reply packet to the hybrid terminal via the Internet.),

b) Add one or more data elements to the first data entity generate a second data entity, the second data entity formatted for a second medium (Col 6, lines 37-39. Hybrid gateway encapsulates the packet to send over the satellite transmission.); and

c) Send the second data entity over the second medium, the second medium different from the first medium (Col 6, lines 41-44. Satellite gateway broadcasts the packets send from the gateway.),

d) Receive the second data entity from the second medium (Col 6, lines 45-49. Hybrid terminal receives the satellite packets),

e) Generate the first data entity by removing the data elements (Col 6, lines 48-49. The satellite header is removed, revealing the reply packet); and

f) Insert the first entity into a stream of processing (Col 6, lines 49-50. Reply IP packet is send to the driver).

26. Dillon teaches an invention of receiving the second data entity from the second medium, generating the first data entity by removing the data elements, and inserting the first entity into a stream of processing. However, Dillon does not teach that an agent performs these functions.

27. Zak, Jr. teaches an invention for multiple processing by using agents to perform tasks and monitoring the agents to determine when the agents have completed their tasks (Col 3, lines 38-51; Col 5, lines 3-8). The central resource may perform multiple processing operations by including multiple processing agents (Col 1, lines 16-25).

28. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Dillon and Zak Jr. because the teachings of Zak Jr to employ agents to perform multiple processing improves the efficiency of Dillon's invention by utilizing the resources of Dillon's invention and increasing the rate of processing.

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29. As per claim 59, Dillon teaches an invention for adding headers to packets to determine the medium of transmission for downloading of data. Dillon's invention comprises of: (Col 4, lines 39-42. The invention has a processor to execute instructions stored in memory.)

a) Receiving a first data entity transmitted over a second medium, the second medium different from a first medium, the first data entity having been transformed from a second data entity by the addition of one or more data elements (Col 6, lines 45-48. Hybrid terminal receives packet send over the satellite link. Col 6, lines 37-38. Hybrid gateway encapsulates the packet for satellite transmission. Col 18, lines 8-10. There are two mediums for transmission, through satellite or the Internet),

b) Generating the second data entity by removing the data elements (Col 6, lines 44-45. Satellite header is removed from the packet); and

c) Inserting the second data entity into a stream of processing (Col 6, lines 44-45. The reply IP packet is send to the driver).

Dillon does not teach that an agent performs these functions.

30. Zak, Jr. teaches an invention for multiple processing by using agents to perform tasks and monitoring the agents to determine when the agents have completed their tasks (Col 3, lines 38-51; Col 5, lines 3-8). The central resource may perform multiple processing operations by including multiple processing agents (Col 1, lines 16-25).

31. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Dillon and Zak Jr. because the teachings of Zak Jr to employ

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agents to perform multiple processing improves the efficiency of Dillon's invention by utilizing the resources of Dillon's invention and increase the rate of processing.

32. As per claims 7, 18, and 35, Dillon teaches an invention where a gateway performs the step of adding data elements (Col 6, lines 35-38). However, Dillon does not teach that agents perform this task.

33. Zak, Jr. teaches an invention for multiple processing by using agents to perform tasks and monitoring the agents to determine when the agents have completed their tasks (Col 3, lines 38-51; Col 5, lines 3-8). The central resource may perform multiple processing operations by including multiple processing agents (Col 1, lines 16-25).

34. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Dillon and Zak Jr. because the teachings of Zak Jr to employ agents to perform multiple processing tasks improves the efficiency of Dillon's invention by utilizing the resources of Dillon's invention and increase the rate of processing.

35. As per claims 8, 9, 19, 20, 28, 30, and 31, Dillon teaches an invention where hybrid terminal removes the header from the packet and sends the packet to the driver (Col 6, lines 48-50). However, Dillon does not teach that agents perform this task.

36. Zak, Jr. teaches an invention for multiple processing by using agents to perform tasks and monitoring the agents to determine when the agents have completed their tasks (Col 3, lines 38-51; Col 5, lines 3-8). The central resource may perform multiple processing operations by including multiple processing agents (Col 1, lines 16-25).



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37. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Dillon and Zak Jr. because the teachings of Zak Jr to employ agents to perform multiple processing tasks improves the efficiency of Dillon's invention by utilizing the resources of Dillon's invention and increase the rate of processing.

38. Claims 12, 23, 29, 47, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon, US Patent #6,115,750 and in view of "Official Notice."

39. As per claims 12 and 23, Dillon teaches the method of removing and inserting from a hybrid terminal (Col 6, lines 45-50), where the terminal has a processor to execute functions stored in memory (Col 4, lines 39-42).

40. Dillon does not specifically teach that the processor is an ARC processor. However, "Official Notice" is taken by the Examiner that an ARC processor is well known in the art. There are various types of processors that can be used to implement the invention. It would have been obvious to use an ARC processor for the invention because it would provide high performance for applications by providing 32-bit instructions, data, and addressing, and its application-specific instruction increases the capability by allowing the user to add user-specified extensions.

41. As per claim 29, Dillon teaches the method of receiving, generating, and inserting on a hybrid terminal (Col 6, lines 45-50), where the terminal has a processor to execute functions stored in memory (Col 4, lines 39-42).

42. Dillon does not specifically teach that the processor is an ARC processor. However, "Official Notice" is taken by the Examiner that an ARC processor is well known in the art. There

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are various types of processors that can be used to implement the invention. It would have been obvious to use an ARC processor for the invention because it would provide high performance for applications by providing 32-bit instructions, data, and addressing, and its application-specific instruction increases the capability by allowing the user to add user-specified extensions.

43. As per claims 47 and 51, Dillon teaches the method of receiving, generating, and inserting on a hybrid terminal (Col 6, lines 45-50), where the terminal has a processor to execute functions stored in memory (Col 4, lines 39-42).

44. Dillon does not specifically teach that the processor is an ARC processor. However, "Official Notice" is taken by the Examiner that an ARC processor is well known in the art. There are various types of processors that can be used to implement the invention. It would have been obvious to use an ARC processor for the invention because it would provide high performance for applications by providing 32-bit instructions, data, and addressing and its application-specific instruction increases the capability by allowing the user to add user-specified extensions.

45. Claims 14, 25, 33, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon, US Patent #6,115,750 and in view of Burkhardt, Jr. et al, US Patent #5,142,683 (Burkhardt, Jr. hereinafter).

46. As per claims 14, 25, 33, and 37, Dillon does not teach the method, wherein the step of transmitting further comprises the steps of writing to a mailbox and reading from the mailbox.

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47. Burkhardt, Jr. teaches an invention for communication between processors, where processors communicate by sending messages to and from a mailbox. When a client agent wishes to send a request, it writes a message into a mailbox, specifying the desired processor in an address field and sends an interrupt request. The server agent at the receiving processor determines that it has a pending request and reads the mailbox (Col 10, line 51 - Col 11, line 49).

48. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Dillon and Burkhardt, Jr. because the teachings of Burkhardt, Jr. to use a mailbox system for communications would improve the efficiency of Dillon's invention by allowing service for high speed network connection without overloading the processors and providing an efficient message passing system in a multiprocessor environment.

49. Claims 46, 49, 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon, US Patent #6,115,750 and in view of Isfeld et al, US Patent #5,802,278 (Isfeld hereinafter).

50. As per claim 69, Dillon teaches an invention for adding headers to packets to determine the medium of transmission for downloading of data. Dillon's invention comprises of

a) A target server accessible by the software tool to receive a data entity from the software development tool and configured to generate a first package based on the data entity and formatted for transmission over a first communication medium (Col 5, lines 55-58. Within hybrid terminal, software generates a request packet. Col 6, line 20. Application server receives the request packet. Col 6, lines 33-34. Application server generates a reply packet.

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Col 18, lines 53-37. If the packet is send over the first medium, it is send through the Internet);  
and

b) A medium translation system coupled to the target server and configured to receive the first package Col 6, lines 35-36. Hybrid gateway receives the reply packet from the application server),

c) Convert the first package into a second package based on the first package and formatted for transmission over a second communication medium different from the first communication medium (Col 6, lines 37-39. Reply packet is encapsulated for satellite transmission),

d) Send the second package over the second communication medium (Col 6, lines 43-44. The packets are send over the satellite transmission.)

51. Dillon does not teach the system comprising of a software development tool, checking the availability of a buffer on a target, sending the package over the second communication medium to the buffer when the buffer is available, and sending an indication to the target that the second package is present in the buffer.

52. Isfeld teaches an invention for communication systems for transferring messages and data packets across the network backbone. Isfeld teaches a system which has a debugging software (Col 33, lines 14-16), checking the availability of the buffer and sending the packet over the medium if the buffer is available (Col 15, lines 26-31), and sending an indication to the target that the packet is present in the buffer (Col 15, line 60).

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53. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Dillon and Isfeld because Isfeld's teaching of checking the availability of the buffer, sending the packet if the buffer is available, and giving an indication that the packet is in the buffer would improve the system processing of Dillon's invention by not overwriting files stored in the buffer, which would ensure that the transmitted packets are not overwritten. It would also improve the efficiency of the data paths and allow for better for synchronization of Internet working functions.

54. As per claims 46 and 49, Dillon does not teach of a system as recited in claims 42 and 43, wherein the host computing environment further includes a debugger.

55. Isfeld teaches an invention for communication systems for transferring messages and data packets across the network backbone. Isfeld teaches a system which has a debugging software (Col 33, lines 14-16).

56. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Dillon and Isfeld to include a debugger in the system because a debugger in Dillon's invention would ensure the integrity of Dillon's system by identifying coding errors and correct any software/hardware problems that might arise in the system.

57. Claim 70 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon, US Patent #6,115,750 and Isfeld et al, US Patent #5,802,278 and in view of Kerns et al, US Patent #6,154,460 (Kerns hereinafter).

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58. As per claim 70, Dillon does not teach of an invention wherein the indication included the address of a memory location of the second package.

59. Kerns teaches an invention for data packet transmission where the indication of the location of the buffer descriptor array comprises a memory address pointer (Col 8, lines 53-55).

60. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Dillon and Kerns because the teachings of Kerns for the indication to include the address of the memory location improves Dillon's invention by providing a more efficient method of transferring of packets across a communications network since providing the location of the memory will allow for faster data retrieval.

61. Claims 5, 68, and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dillon, US Patent #6,115,750 and in view of Sakamoto et al, US Application #2001/0010052 A1 (Sakamoto hereinafter).

62. As per claims 5, 68, 75, Dillon teaches an invention for adding headers to packets to determine the medium of transmission for downloading of data. Dillon's invention comprises of: (Col 4, lines 39-42. The invention has a processor to execute instructions stored in memory.)

a) Intercepting a first data entity from a stream of processing, before the stream of processing sends the first data entity over a first medium, the first medium differing from second medium (Col 6, lines 5-20. For satellite transmission, IP packet requests are encapsulated and send to the SLIP provider then to the application server. Col 6, lines 32-33. The application server sends reply packets to the hybrid gateway. Col 18, lines 48-56. For terrestrial path, the application server would have send the reply packet to the hybrid terminal via the Internet.).

b) Adding one or more data elements to the first data entity to generate a second data entity, the data elements allowing the second data entity to be transferred over the second medium (Col 6, lines 37-39. Hybrid gateway encapsulates the packet to send over the satellite transmission.)

c) Transmitting the second data entity over the second medium (Col 6, lines 41-44. The hybrid gateway sends the packet to satellite gateway, where the satellite gateway broadcasts the packets send from the gateway.),

d) Removing the data elements from the second data entity to generate a first data entity (Col 6, lines 48-49. Hybrid terminal removes satellite header revealing reply IP packet), and

e) Inserting the first data entity into the stream of processing, after the stream of processing would have send the first data entity over the first medium (Col 6, lines 49-50. Once the reply packet is revealed, it is send to the driver. Col 18, lines 36-44. For terrestrial transmission, the application server sends the reply packets via the Internet and to the hybrid terminal).

63. Dillon does not teach of a step of generating a plurality of threads, each thread executable on a separate processing device.

64. Sakamoto teaches a method for controlling multithreading, where an operating program generates threads that are used for parallel processing (Pg. 1, Paragraph 0002). A

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multithreading controller is incorporated in the system, which requests the OS to generate threads. The multithreading controller then executes the threads (Pg. 1, Paragraph 0019).

65. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Dillon and Sakamoto because the teachings of Sakamoto to use a multithreading controller in the system to request threads from the OS and to execute the threads would improve the efficiency of Dillon's invention by increasing the system processing speed and efficiently using system resources.

### ***Conclusion***

66. A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action.

67. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966 and fax number is 571 273-3966. The examiner can normally be reached on Monday to Thursday 8 to 5:30.

68. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on 571 272-3964.



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69. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 **JOHN FOLLANSBEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100**

January 4, 2005  
JJ